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April 17, 2004

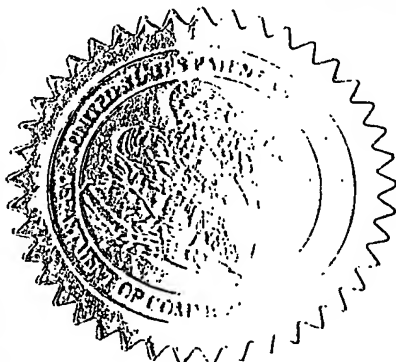
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APPLICATION NUMBER: 10/350,647

FILING DATE: January 24, 2003

RELATED PCT APPLICATION NUMBER: PCT/US04/01946

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PTO/SB/05 (03-01)

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UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	CAS-001
First Inventor	Casasanta
Title	Grip for a Hockey Stick with a Hollow-ended Shaft
Express Mail Label No.	EU693634075US

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

- ☒ Fee Transmittal Form (e.g., PTO/SB/17)
(Submit an original and a duplicate for fee processing)
- ☒ Applicant claims small entity status.
See 37 CFR 1.27.
- ☒ Specification [Total Pages 18]
(preferred arrangement set forth below)
 - Descriptive title of the invention
 - Cross Reference to Related Applications
 - Statement Regarding Fed sponsored R & D
 - Reference to sequence listing, a table, or a computer program listing appendix
 - Background of the invention
 - Brief Summary of the invention
 - Brief Description of the Drawings (if filed)
 - Detailed Description
 - Claim(s)
 - Abstract of the Disclosure
- ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 8]
- Oath or Declaration [Total Pages 3]
 - ☒ Newly executed (original or copy)
Copy from a prior application (37 CFR 1.63 (d))
(for continuation/divisional with Box 18 completed)
 - ☐ **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
- ☒ Application Data Sheet. See 37 CFR 1.76

ADDRESS TO: Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

- ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
- Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
 - ☐ Computer Readable Form (CRF)
 - Specification Sequence Listing on:
 - ☐ CD-ROM or CD-R (2 copies); or
 - ☐ paper
 - ☐ Statements verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

- ☐ Assignment Papers (cover sheet & document(s))
- ☐ 37 CFR 3.73(b) Statement (when there is an assignee) ☐ Power of Attorney
- ☐ English Translation Document (if applicable)
- ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
- ☐ Preliminary Amendment
- ☒ Return Receipt Postcard (MPEP 503)
(Should be specifically itemized)
- ☐ Certified Copy of Priority Document(s)
(if foreign priority is claimed)
- ☐ Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
- ☐ Other: _____

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: _____


Prior application information: Examiner: _____ Group Art Unit: _____

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

19. CORRESPONDENCE ADDRESS

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**FEE TRANSMITTAL
for FY 2003**

Effective 01/01/2003. Patent fees are subject to annual revision.

☒ Applicant claims small entity status. See 37 CFR 1.27TOTAL AMOUNT OF PAYMENT (\$) **429.00****Complete if Known**

Application Number	TBD
Filing Date	1/24/03
First Named Inventor	JOSEPH CASASANTA
Examiner Name	TBD
Art Unit	TBD
Attorney Docket No.	CAS-001

METHOD OF PAYMENT (check all that apply)☒ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None☐ Deposit Account:Deposit
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The Commissioner is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Credit any overpayments☐ Charge any additional fee(s) during the pendency of this application☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.**FEE CALCULATION****1. BASIC FILING FEE**

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
1001 750	2001 375	Utility filing fee	375
1002 330	2002 165	Design filing fee	
1003 520	2003 260	Plant filing fee	
1004 750	2004 375	Reissue filing fee	
1005 160	2005 80	Provisional filing fee	
SUBTOTAL (1)			(\$)

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Total Claims	Extra Claims	Fee from below	Fee Paid
26	-20** = 6	X 9	54
3	-3** = 0	X 0	0

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description
1202 18	2202 9	Claims in excess of 20
1201 84	2201 42	Independent claims in excess of 3
1203 280	2203 140	Multiple dependent claim, if not paid
1204 84	2204 42	** Reissue independent claims over original patent
1205 18	2205 9	** Reissue claims in excess of 20 and over original patent
SUBTOTAL (2)		

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)**3. ADDITIONAL FEES**

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
1051 130	2051 65	Surcharge - late filing fee or oath	
1052 50	2052 25	Surcharge - late provisional filing fee or cover sheet	
1053 130	1053 130	Non-English specification	
1812 2,520	1812 2,520	For filing a request for ex parte reexamination	
1804 920*	1804 920*	Requesting publication of SIR prior to Examiner action	
1805 1,840*	1805 1,840*	Requesting publication of SIR after Examiner action	
1251 110	2251 55	Extension for reply within first month	
1252 410	2252 205	Extension for reply within second month	
1253 930	2253 465	Extension for reply within third month	
1254 1,450	2254 725	Extension for reply within fourth month	
1255 1,970	2255 985	Extension for reply within fifth month	
1401 320	2401 160	Notice of Appeal	
1402 320	2402 160	Filing a brief in support of an appeal	
1403 280	2403 140	Request for oral hearing	
1451 1,510	1451 1,510	Petition to institute a public use proceeding	
1452 110	2452 55	Petition to revive - unavoidable	
1453 1,300	2453 650	Petition to revive - unintentional	
1501 1,300	2501 650	Utility issue fee (or reissue)	
1502 470	2502 235	Design issue fee	
1503 630	2503 315	Plant issue fee	
1460 130	1460 130	Petitions to the Commissioner	
1807 50	1807 50	Processing fee under 37 CFR 1.17(q)	
1806 180	1806 180	Submission of Information Disclosure Stmt	
8021 40	8021 40	Recording each patent assignment per property (times number of properties)	
1809 750	2809 375	Filing a submission after final rejection (37 CFR 1.129(a))	
1810 750	2810 375	For each additional invention to be examined (37 CFR 1.129(b))	
1801 750	2801 375	Request for Continued Examination (RCE)	
1802 900	1802 900	Request for expedited examination of a design application	

Other fee (specify)

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$) **0****SUBMITTED BY**

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Signature	Michael A. Rodriguez	Date	1/24/03		

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This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

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Country of Residence :: USA
Citizenship :: USA

Correspondence Information

Correspondence Customer Number :: 32836

Application Information

Title Line One :: Grip for a Hockey Stick with a Hollow-ended Shaft
Title Line Two ::
Title Line Three ::
Total Drawing Sheets :: 8
Formal Drawings :: YES
Application Type :: Utility
Docket Number :: CAS-001

Representative Information

Representative Customer Number :: 32836

Continuity Information

This application is a ::
>Application One ::
Filing Date ::

Express Mail Label No.: EU693634075US
(CAS-001)

GRIP FOR A HOCKEY STICK WITH A HOLLOW-ENDED SHAFT

FIELD OF THE INVENTION

[0001] The invention relates generally to a grip for sport sticks. In particular, the invention relates to a grip for a hollow or partially hollow shaft of a hockey stick.

BACKGROUND

[0002] Traditional hockey sticks are made of wood and have a straight rectangular shaft (or handle) with a curved blade at one end of the shaft for handling and shooting a hockey puck. The hockey player holds the hockey stick at the other end of the shaft. The surface of the shaft is smooth and can slide within the player's hands. Typically, the player wears thick gloves, making the hockey stick more difficult to grasp. To improve the grip and keep the stick from sliding out of the player's hands, the player often wraps cloth tape around the end of the shaft to aid in grasping the stick. With tape the player also often builds a knob at the end of the shaft.

[0003] In addition to wooden hockey sticks, industry has produced hockey sticks of different material, such as plastic, which offers a safer alternative to the wooden stick and proves gentler to gymnasium floors (useful for floor hockey). Industry has also recently produced hockey sticks of aluminum and composite construction. Such hockey sticks are lighter in weight and have greater durability than the traditional wooden hockey sticks. Notwithstanding such improvements, these new-construction hockey sticks are similar to their traditional wooden counterparts in that they, too, have straight rectangular shafts and are therefore difficult to hold. Accordingly, the traditional method of using tape to produce a handgrip and a knob has carried over to the newer aluminum and composite-type sticks. As with the wooden sticks, however, these taped grips are awkward to use because the taped grip is predominately rectangular in

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shape, making it difficult and at times uncomfortable to hold with ungloved or gloved hands.

Typically, taped grips are also unsightly and wear out quickly.

[0004] This discomfort and unsightliness associated with taped grips has led to the development of hockey stick grips that seek to improve stick handling comfort, style, and ease of use. Canadian Patent Application No. 2,270,681, published on November 4, 2000, discloses an example of a resilient grip with a protrusion that rounds out one side to fit the palm of a player's hand. This grip has a handle recess (or sleeve) for receiving the end of the solid hockey stick handle (i.e., shaft) of wood or composite construction. Although the grip may improve the handling comfort of the player, methods for inserting and removing the hockey stick handle into and from the handle recess can be difficult. The '681 application suggests blowing compressed air into the handle recess in order to insert or remove the handle from the grip. The inconvenience of using a compressed air supply is likely to discourage removing the grip, for example, if the stick were to break. Another disadvantage is that after inserting the hockey stick handle into the sleeve, the sleeve is thicker and bulkier than the stick handle itself, making the sleeve uncomfortable to grasp because, for some users, the thickness is too large for their hand. Accordingly, there is a need for a comfortable grip that can be used with the new-construction hockey sticks without the aforementioned disadvantages.

SUMMARY

[0005] In one aspect, the invention features a grip for attachment to a sport stick having a shaft. One end of the shaft has an opening extending longitudinally into the shaft. The grip has an elongated grip portion having a hilt. The hilt has a longitudinal dimension that is sized for being grasped by an entire hand of a user. The grip also has an insertion portion adjacent to one

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end of the elongated grip portion. The insertion portion is sized to provide close insertion into the opening at the one end of the shaft.

[0006] In another aspect, the invention features a grip for attachment to a sport stick having a shaft. The shaft has an opening at one end extending longitudinally into the shaft. The grip comprises a hilt with a longitudinal dimension that is sized for being grasped by an entire hand of a user. The grip also has means for attaching the hilt to the shaft. The attaching means includes an insertion portion that is inserted into the opening at the one end of the shaft.

[0007] In yet another aspect, the invention features a sport stick comprising a shaft and a grip attached to the shaft. The shaft has an opening at a first end. The opening extends longitudinally from the first end into the shaft. The grip has an insertion portion and a grip portion. The insertion portion is inserted into the opening at the first end of the shaft. The grip portion has a hilt with a longitudinal dimension that is sized for being grasped by an entire hand of a user.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] The above and further advantages of this invention may be better understood by referring to the following description in conjunction with the accompanying drawings, in which like numerals indicate like structural elements and features in various figures. The drawings are not necessarily to scale, emphasis instead being placed upon illustrating the principles of the invention.

[0009] FIG. 1 is a front view of one embodiment of a grip, constructed in accordance with the invention, for use with a sport stick.

[00010] FIG. 2 is a side view of the grip shown in FIG. 1.

[00011] FIG. 3A is a cross-section view of embodiment of a universal grip of the present invention along line A-A' shown in FIG. 2.

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[00012] FIG. 3B is a cross-section view of an embodiment of a right-handed grip of the present invention along line A-A' shown in FIG. 2.

[00013] FIG. 3C is a cross-section view of an embodiment of a left-handed grip of the present invention along line A-A' shown in FIG. 2.

[00014] FIG. 4 is a side view of the grip shown in FIG. 2 being grasped by an ungloved hand.

[00015] FIG. 5 is a side view of another embodiment of the grip of the invention with individual finger indentations.

[00016] FIG. 6 is view of an embodiment of the grip constructed as a single integral piece.

[00017] FIG. 7A is a view of a grip core according to one embodiment of the invention.

[00018] FIG. 7B is a view of a grip portion according to one embodiment of the invention.

[00019] FIG. 8A is a view of a sport stick shaft aligned for attachment with one embodiment of the grip of the invention.

[00020] FIG. 8B is a view of the sport stick shaft attached to one embodiment of the grip of the invention.

[00021] FIG. 8C is a cross-section view along the line B-B' of FIG. 8B at a point along the sport stick shaft where the grip is inserted in the shaft.

[00022] FIG. 8D is a diagram of an embodiment of a hockey stick having a grip of the invention attached thereto.

DETAILED DESCRIPTION

[00023] In brief overview, the present invention features an ergonomic grip that is used with a sport stick. The grip is particularly adapted for use with hollow hockey sticks, such as the new construction aluminum and composite sticks, and provides comfort and style that a player cannot typically achieve with the traditional method of taping the gripped end of the sport stick.

Although described with reference to hockey sticks (e.g., ice, street, and floor), it is to be

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understood that the principles of the invention also apply to other types of sticks, such as lacrosse sticks and walking sticks, provided such sticks have hollow or hollow-ended shafts, and to sticks constructed of different types of materials or substances, for example, titanium, and to combinations of different materials and substances.

[00024] FIG. 1 shows a front view of an embodiment of a sport stick grip 10 constructed in accordance with the principles of the invention. The grip 10 includes a shaft interface portion 14 and a grip portion 18. The shaft interface portion 14 has an insertion portion 16 that enters partially or completely into an opening at one end of a hollow or partially hollow shaft. The insertion portion 16 has cross-section dimensions that provide a close fit into the shaft.

[00025] For example, hollow hockey stick shafts (or handles) are rectangular in cross-section and have outer dimensions of approximately 0.75 inches by 1.125 inches. Inner dimensions are approximately 0.625 inches by 1.02 inches. To fit snugly within the stick shaft, in one embodiment the cross-section dimensions of the insertion portion 16 are sized to be slightly smaller than inner cross-section dimensions of the opening in the hockey stick shaft so the insertion portion 16 can be slid directly into the opening. In another embodiment, the cross-section dimensions are the same as or slightly larger than the inner cross-section dimensions of the opening in the hockey stick shaft. In this embodiment, the insertion portion 16 is press (or interference) fit into the shaft opening.

[00026] The insertion portion 16 is also sufficiently long to enable a solid connection to be formed between the grip 10 and the stick shaft. Embodiments of the grip 10 have insertion portions 16 with lengths ranging from approximately .25 to approximately 3.5 inches. Insertion portions 16 can be constructed with different lengths without departing from the principles of the invention.

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[00027] The shaft interface 14 also includes a shaft stop 20. The shaft stop 20 can have dimensions that are smaller, the same as, or slightly larger than the cross-section dimensions of the sport stick. When such dimensions are larger than the cross-section dimensions of the sport stick, the shaft stop 20 prevents the edge of the stick shaft from making contact with the grip portion 18.

[00028] The grip portion 18 includes a hilt 26 and optionally, a guard portion 22 and a knob 30. The user of the sport stick (with an attached grip 10) grasps the hilt 26 with one hand along a longitudinal axis 28. The length of the hilt 26 (i.e., from guard portion 22 to knob 30) is sized to receive the entire hand. In some embodiments, the length of the hilt 26 accommodates a gloved hand. Other hilt 26 embodiments are sized for an ungloved (i.e., bare) hand. Embodiments of the grip 10 have hilts of various diameters or thicknesses (i.e., for accommodating the different hand and glove sizes in the general population). For example, the hilt 26 can be thicker, thinner, or of the same thickness as the hockey stick shaft.

[00029] Optionally, the hilt 26 has a plurality of ridges 34 that increases the surface area that comes into contact with the hand of the user, and thus improves the user's grasp of the grip 10. The number, shape, and style of the ridges 34 shown in FIG. 1 are merely exemplary, and do not limit the scope of the principles of the invention. In some embodiments, the ridges 34 are raised from the surface of the hilt 26. In other embodiments the ridges 34 are depressions in the surface of the hilt 26. In yet other embodiments, both types of ridges 34 are used.

[00030] The guard portion 22 blocks another sport stick (e.g., of an opponent), during the course of a game, from sliding over the shaft onto the hilt 26 and striking the user's hand. The design of the guard portion 22 can vary. For example, embodiments of the guard portion 22 include a crosspiece, as shown, a curved shield that protects the fingers, or a full basket that

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nearly envelopes the hand. Like the guard portion 22, the knob 30 is larger in diameter than the hilt 26. The knob 30 helps keep the sport stick from sliding out of the hand of the user during game play. Also, the end 32 of the knob 30 is curved to mitigate injury should the grip end of the stick strike or spear another player. Another advantage is that the knob 30 prevents the end of the stick from entering the mask of another player.

[00031] FIG. 2 shows a side view of the embodiment of the sport stick grip 10 shown in FIG. 1. In addition to the grip features shown in FIG. 1, this side view illustrates that the hilt 26, on one side, has a first surface 40 with a longitudinal curvature (i.e., from guard portion 22 to knob 30) and, on another side, a second longitudinal surface 44, which in one embodiment is approximately planar. Different embodiments of the grip 10 have surfaces 40, 44 with varying degrees of curvature to accommodate the varying hand sizes in the general population and intended uses (e.g., with or without gloves) for the stick. For example, other embodiments of the grip 10 have hilts 26 that are approximately rectangular in shape (longitudinally) and have first and second longitudinal surfaces 40, 44 that are substantially straight.

[00032] Optionally, the hilt 26 also has an indentation 42 for receiving fingers that wrap around the hilt 26. FIG. 3A, FIG. 3B, and FIG. 3C show cross-sections of different embodiments of the hilt 26, 26', and 26'' (generally, hilt 26), showing the indentation 42 for universal, right-handed, or left-handed use, respectively. Each cross-section is along line A-A' in FIG. 2 and shows that the first surface 40 on one side of the hilt 26 (i.e., facing the palm of the hand) and the second surface 44 on the opposite side of the hilt 26 (i.e., facing the fingers) each have a latitudinal curve. FIG. 3A also shows diameters D_1 and D_2 of the hilt 26. Either or both diameters D_1 and D_2 of the hilt 26 can be shorter or have the same length as the corresponding dimension of the hockey stick shaft. (Diameter D_1 corresponds to the longer cross-sectional

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dimension of the hockey stick shaft and diameter D_2 corresponds to the shorter cross-sectional dimension of the hockey stick shaft.)

[00033] When a user's hand grasps the grip 10, as shown with dashed lines in FIG. 4, part of the surface 40 presses against the palm of the hand, the fingers wrap around the surface 44 of the hilt 26, and the tips of the fingers lay in the indentation 42. For those embodiments with such features, the curved surfaces 40, 44 and indentation 42 improve the comfortable feel of the grip 10 in the user's hand. In some embodiments, the indentation 42 is a single large depression for receiving each of the fingers that wrap around the hilt 26, or separate depressions each sized to receive a single finger (as shown in FIG. 5).

[00034] FIG. 6 shows an embodiment of the grip 10 constructed as a single (i.e., integral) piece. The grip 10 shown in FIG. 6 is constructed of a resilient material, such as polyvinyl. Other types of construction materials for an integral grip 10 include, but are not limited to, wood, plastic, metal, composite, and rubber.

[00035] FIG. 7A and FIG. 7B show the construction of the grip 10 as a plurality of pieces. FIG. 7A shows a grip core 60, including the insertion portion 16 and shaft stop 20, and FIG. 7B shows the grip portion 18, including a bore 64 that extends through the grip portion 18, for receiving the grip core 60. The construction material of the grip core 60 is generally designed to provide a solid skeletal structure for the grip portion 18. As shown in FIG. 7A, the shaft stop 20 is thinner than the insertion portion 16 so that when the core 60 is within the bore 64, the thickness of the hilt 26 of the grip 10 approximates the thickness of the hockey stick shaft. As described above, the thickness of the hilt 26 can be less than, equal to, or greater than the thickness of the hockey stick shaft. The thickness of the hilt 26 depends, in part, on the thickness of the core 60. Also, the core 60 can be solid or hollow, and examples of construction material

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include, but are not limited to, wood, plastic, metal, composite, or rubber. Examples of construction material for the grip portion 18 include, but are not limited to, plastic, rubber, and composite. Methods of manufacturing cores and grip portions of such materials are known in the art.

[00036] Methods for combining the core 60 and the grip portion 18 to produce the grip 10 are also known in the art. In one embodiment, the grip portion 18 is formed or molded around the core 60. In another embodiment, the grip portion 18 is produced separately from the core 60, and the core 60 is subsequently inserted into the bore 64 of the grip portion 18. Optionally, the grip portion 18 has a small opening at one end (opposite the end that receives the core 60) to facilitate insertion of the core 60 by allowing air to escape when the core 60 is inserted. An epoxy (or glue, in general) firmly fastens the core 60 within the grip portion 18. For both types of methods, once the core 60 is fixed within the grip portion 18, the insertion portion 16 projects from the grip portion 18, and, for the embodiment shown in FIG. 7A and FIG. 7B, the shaft stop 20 is encased by the grip portion 18 (i.e., the stick shaft abuts the guard portion 22 of the grip portion 18 when connected to the grip 10).

[00037] FIG. 8A shows a shaft 80 of a sport stick and grip 10 of the invention prior to attachment. The insertion portion 16 of the grip 10 is aligned with an opening 84 at one end of the sport stick shaft 80. In one embodiment, heat-activated adhesive (e.g., glue, epoxy) coats the insertion portion 16. To attach the grip 10 to the shaft 80, the user places the insertion portion 16 into the shaft opening 84 and heats the shaft 80 in the vicinity of the insertion portion 16. Alternatively, the adhesive is heated prior to inserting the insertion portion 16 into the shaft 80. The heat causes the adhesive to soften and contact the inside walls of the shaft 80. Upon cooling, the adhesive solidifies and affixes the insertion portion 16 to the inside walls of the shaft

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80. Because the insertion portion 16 is sized to fit closely within the shaft 80, an adhesive may not be necessary to achieve a secure attachment. This is particularly applicable to those embodiments in which the insertion portion 16 is press fit into the opening of the shaft 80. In other embodiments, a different type of fastener 88 (FIG. 8B), such as a bolt or screw, is used instead of or in addition to the adhesive to affix the handle to the shaft 80.

[00038] FIG. 8B shows the grip 10 after attachment to the sport stick shaft 80. The extent of penetration of the insertion portion 16 within the shaft 80 is indicated by the dashed line 86.

FIG. 8C shows a cross-section along the line B-B' in FIG. 8B, illustrating an example of a close fit between the insertion portion 16 and the inside walls of the shaft 80. Although not shown in FIG. 8C, some contact between the insertion portion 16 and the inside walls can occur at some point along the shaft 80. For the typical hockey stick, the cross-section is rectangular. It is to be understood that for other types of sticks, the cross-section can have different shapes, such as triangular (e.g., particular hockey sticks), hexagonal (e.g., for lacrosse sticks), elliptical, octagonal, circular. FIG. 8D shows an embodiment of a hockey stick including the grip 10 attached to one end of the shaft 80 and a hockey stick blade 100 attached to the other end of the shaft 80.

[00039] Occasionally, the user may desire to remove the grip 10 from the shaft 80. For example, normal wear and tear, the sport stick may break, the user's hands may grow in size, or the user may desire a differently shaped grip or grip color. To remove the grip 10, the user pulls the grip 10 with sufficient force to remove the insertion portion 16 from the shaft. If a heat-activated adhesive is used to secure the grip 10 to the shaft, the user heats the shaft 80 in the vicinity of the insertion portion 16 to soften the adhesive sufficiently to allow the grip 10 to be pulled from shaft 80.

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[00040] While the invention has been shown and described with reference to specific preferred embodiments, it should be understood by those skilled in the art that various changes in form and detail may be made therein without departing from the spirit and scope of the invention as defined by the following claims. For example, a grip constructed according to the principles of the invention can be constructed in an assortment of colors, and in a variety of distinctive ergonomic styles; that is, the color, shape, and dimensions of each grip can be customized to satisfy a particular player's taste and physical requirements (e.g., the size of hands and gloves, if worn), and the type of sport played (street hockey, ice hockey, field hockey, floor hockey, lacrosse, etc).

[00041] What is claimed is:

(CAS-001)

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CLAIMS

- 1 1. A grip for attachment to a sport stick having a shaft, one end of the shaft having an
2 opening extending longitudinally into the shaft, the grip comprising:
3 an elongated grip portion having a hilt having a longitudinal dimension sized for
4 being grasped by an entire hand of a user along a longitudinal axis; and
5 an insertion portion adjacent to one end of the elongated grip portion, the insertion
6 portion being sized to provide close insertion into the opening at the one end of the shaft.
- 1 2. The grip of claim 1, wherein the hilt has a curved longitudinal surface that conforms to a
2 curvature of a palm of the hand.
- 1 3. The grip of claim 1, wherein the hilt has a diameter that is smaller than a corresponding
2 cross-sectional dimension of the shaft of the sport stick.
- 1 4. The grip of claim 1, wherein the grip portion includes a guard portion at the one end of
2 the hilt.
- 1 5. The grip of claim 1, wherein the grip portion includes a knob at one end of the grip
2 portion.
- 1 6. The grip of claim 1, wherein the hilt has an indentation in a surface for receiving one or
2 more fingers when the palm of the hand presses against the longitudinally curved surface.
- 1 7. The grip of claim 1, wherein the insertion portion and the grip portion are each part of an
2 integral piece of material.
- 1 8. The grip of claim 1, wherein the insertion portion and the grip portion are constructed of
2 different materials.

(CAS-001)

- 1 9. A grip for attachment to a sport stick having a shaft, the shaft having an opening at one
2 end extending longitudinally into the shaft, the grip comprising:
3 a hilt having a longitudinal dimension sized for being grasped by an entire hand of
4 a user along a longitudinal axis; and
5 means for connecting the hilt to the shaft, the connecting means including an
6 insertion portion that is inserted into the opening at the one end of the shaft.
- 1 10. The grip of claim 9, wherein the hilt has a diameter that is smaller than a corresponding
2 cross-sectional dimension of the shaft of the sport stick.
- 1 11. The grip of claim 9, wherein the hilt has a curved longitudinal surface that conforms to a
2 curvature of a palm of the hand.
- 1 12. The grip of claim 9, further comprising means, disposed at the one end of the hilt, for
2 guarding the hand grasping the hilt.
- 1 13. The grip of claim 9, further comprising means for restricting the hand from sliding off the
2 hilt.
- 1 14. The grip of claim 13, wherein the restricting means includes a knob at the other end of
2 the hilt.
- 1 15. The grip of claim 13, wherein the restricting means includes ridges on a surface of the
2 hilt.
- 1 16. The grip of claim 9, wherein the hilt includes means for receiving one or more fingers
2 when the hand grasps the hilt.

(CAS-001)

- 1 17. A sport stick, comprising:
2 a shaft having an opening at a first end, the opening extending longitudinally from
3 the first end into the shaft;
4 a grip having an insertion portion and a grip portion, the insertion portion being
5 inserted into the opening at the first end of the shaft, the grip portion having a hilt with a
6 longitudinal dimension sized for being grasped by an entire hand of a user, the hilt having
7 a curved surface along a length of the hilt that conforms to a curvature of a palm of the
8 hand.
- 1 18. The sport stick of claim 17, wherein the hilt has a curved longitudinal surface that
2 conforms to a curvature of a palm of the hand.
- 1 19. The grip of claim 17, wherein the hilt has a diameter that is smaller than a corresponding
2 cross-sectional dimension of the shaft of the sport stick.
- 1 20. The sport stick of claim 17, further comprising a fastener securing the insertion portion of
2 the grip to the shaft.
- 1 21. The sport stick of claim 20, wherein the fastener is an adhesive.
- 1 22. The sport stick of claim 17, further comprising a hockey stick blade attached to a second
2 end of the shaft.
- 1 23. The sport stick of claim 17, wherein a longitudinal length of the hilt is sized for being
2 grasped by a gloved hand.

(CAS-001)

- 1 24. The sport stick of claim 17, wherein a longitudinal length of the hilt is sized for being
2 grasped by a bare hand.
- 1 25. The grip of claim 17, wherein the grip portion includes a guard portion at the one end of
2 the hilt.
- 1 26. The grip of claim 17, wherein the grip portion includes a knob at one end of the hilt.

GRIP FOR A HOCKEY STICK WITH A HOLLOW-ENDED SHAFT**ABSTRACT**

Described is a grip for attachment to a sport stick having a shaft. One end of the shaft has a opening extending longitudinally into the shaft. The grip comprises an elongated grip portion having a hilt. The hilt has a longitudinal dimension sized for being grasped by the entire hand of a user. The grip also comprises an insertion portion at one end of the elongated grip portion.

- 5 The insertion portion is sized to provide close insertion into the opening at the one end of the shaft.

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DECLARATION AND POWER OF ATTORNEY FOR UTILITY OR DESIGN PATENT APPLICATION <input checked="" type="checkbox"/> Declaration <input type="checkbox"/> Declaration Submitted with Submitted after Initial Initial Filing Filing (surcharge 37 CFR 1.16(e) required)	Attorney Docket No.	CAS-001
	First Named Inventor	Joseph G. Casasanta, Jr.
	COMPLETE IF KNOWN	
	Application Serial Number	Not yet assigned
	Filing Date	January 24, 2003
	Group Art Unit	Not yet assigned
	Examiner Name	Not yet assigned

As a below named inventor, I hereby declare that:

My residence, post office address, and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Grip for a Hockey Stick with a Hollow-Ended Shaft

(Title of the Invention)

the specification of which

☒ is attached hereto

OR

☐ was filed on [] as United States Application Serial Number or PCT International (MM/DD/YYYY)

Application Number [] and was amended on (MM/DD/YYYY) [] (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose to the Patent Office all information known by me to be material to patentability as defined in 37 CFR 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
				YES	NO
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

☐ Additional foreign application numbers are listed on a supplemental priority data sheet attached hereto.

I hereby claim the benefit under 35 U.S.C. 119(e) of any United States provisional application(s) listed below.

Application Serial Number(s)	Filing Date (MM/DD/YYYY)

☐ Additional provisional application serial numbers are listed on a supplemental priority data sheet attached hereto.

Declaration and Power of Attorney
 Atty. Docket No. CAS-001
 Page 2 of 3

DECLARATION – Utility or Design Patent Application

I hereby claim the benefit under 35 U.S.C. 120 of any United States application(s), or 365(c), of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. Parent Application or PCT Parent Serial Number	Parent Filing Date (MM/DD/YYYY)	Parent Patent Number (if applicable)

☐ Additional U.S. or PCT international application numbers are listed on a supplemental priority data sheet attached hereto.

As a named inventor, I hereby appoint the following registered practitioners to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith: ☐ Customer Number

OR

☒ Registered practitioner(s) name/registration number listed below

Name	Registration Number	Name	Registration Number
William G. Guerin	41,047		
Michael A. Rodriguez	41,274		


☐ Additional registered practitioners named on supplemental Registered Practitioner Information sheet attached hereto.

Direct all correspondence to:

Patent Administrator
 Guerin & Rodriguez, LLP
 5 Mount Royal Avenue
 Marlborough, MA 01752
 Tel. No.: (508) 303-2003
 Fax No.: (508) 303-0005

Declaration and Power of Attorney
 Atty. Docket No. CAS-001
 Page 3 of 3

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Name of Sole or First Inventor:		<input type="checkbox"/> A petition has been filed for this unsigned inventor					
Given Name (first and middle [if any])				Family Name or Surname			
Joseph G.				Casasanta, Jr.			
Inventor's Signature						Date 1/24/03	
Residence	City	State	Country	Citizenship			
	Auburn	MA	USA	USA			
Post Office Address		19 Shary Lane					
P.O. Address (line 2)	City	State	ZIP	Country			
	Auburn	MA	01501	USA			
<input type="checkbox"/> Additional inventors are being named on the supplemental Additional Inventor(s) sheet(s) attached hereto.							
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor					
Given Name (first and middle [if any])				Family Name or Surname			
Inventor's Signature						Date	
Residence	City	State	Country	Citizenship			
Post Office Address							
P.O. Address (line 2)	City	State	ZIP	Country			
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor					
Given Name (first and middle [if any])				Family Name or Surname			
Inventor's Signature						Date	
Residence	City	State	Country	Citizenship			
Post Office Address							
P.O. Address (line 2)	City	State	ZIP	Country			

10
↘

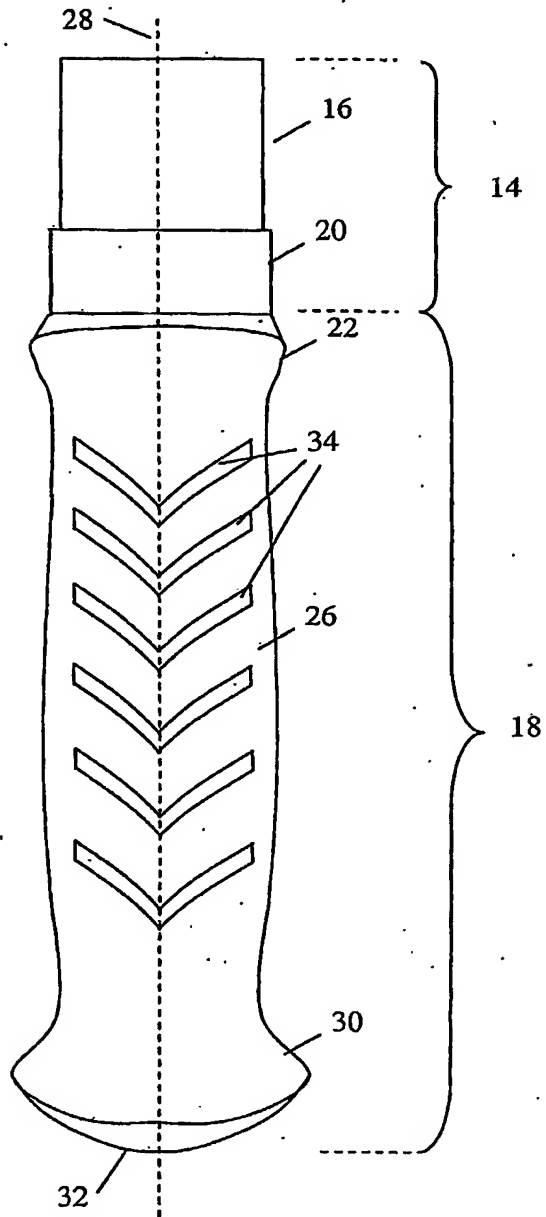


FIG. 1

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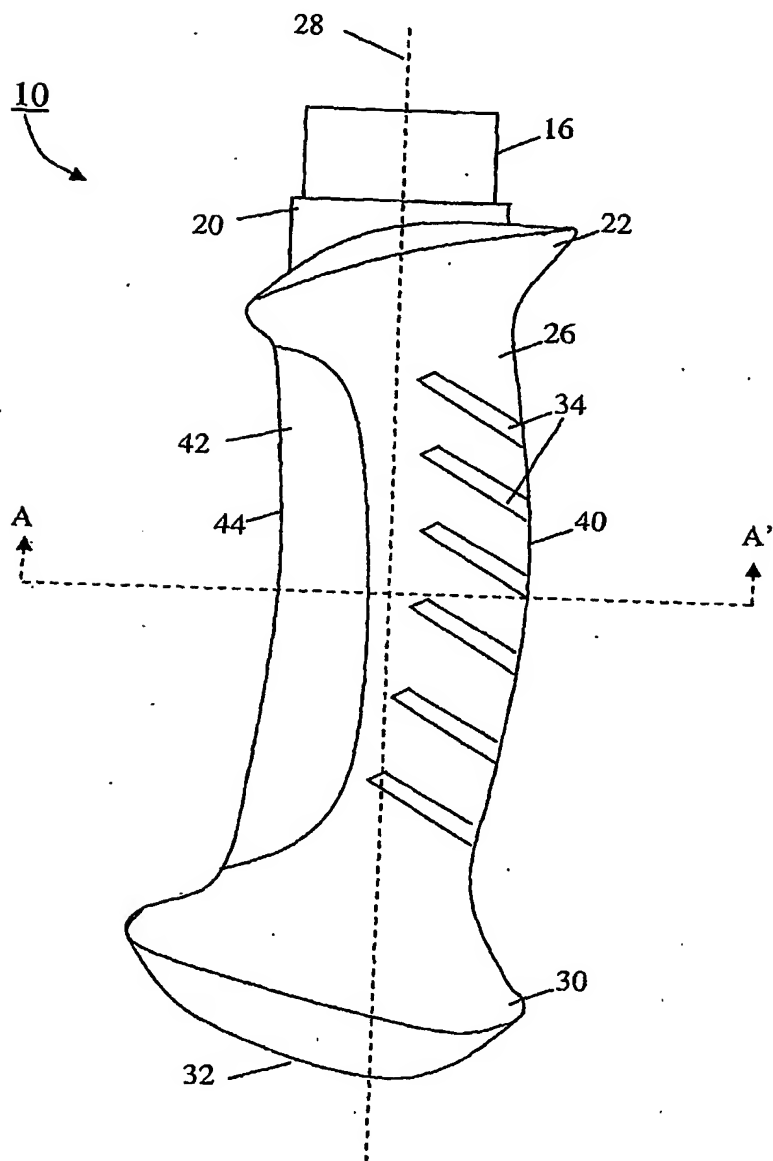


FIG. 2

FIG. 3A:
(Universal)

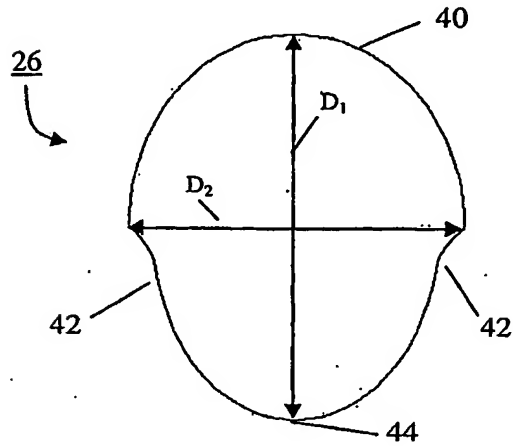


FIG. 3B:
(Right)

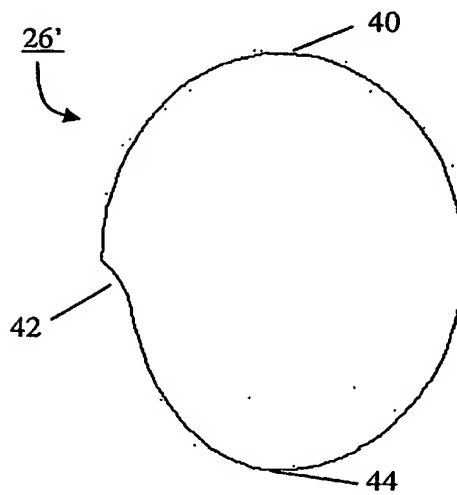
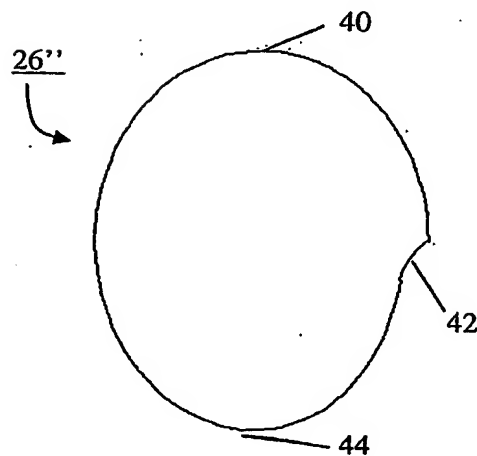


FIG. 3C:
(Left)



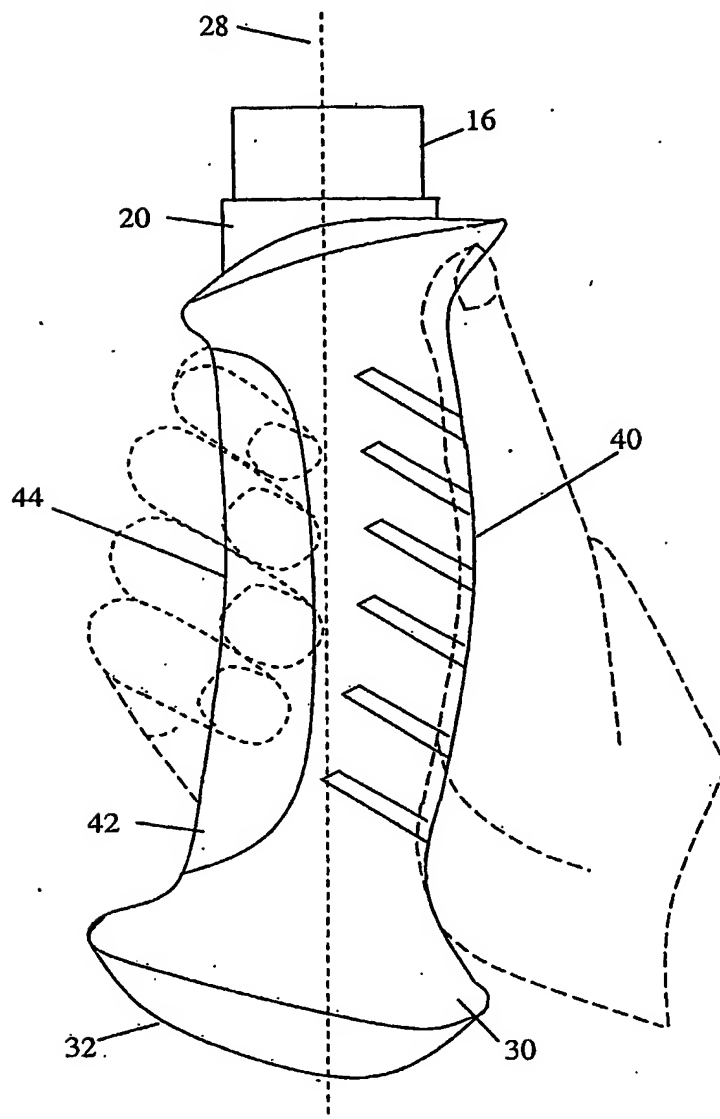


FIG. 4

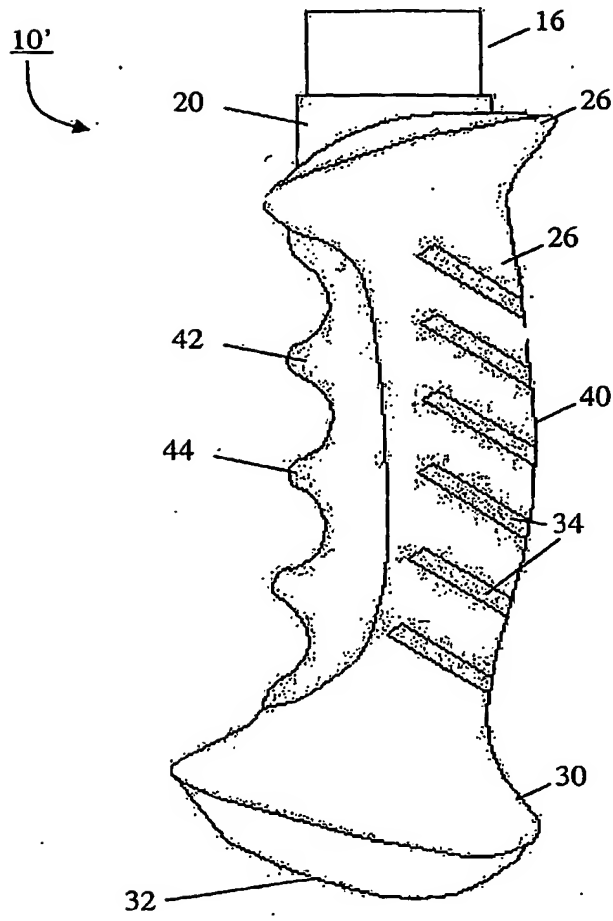


FIG. 5



FIG. 6

Title: Grip for a Hockey Stick with a
Hollow-Ended Shaft
Docket No. CAS-001
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Michael A. Rodriguez (508-303-2003)
Sheet 6/8

FIG. 7A:

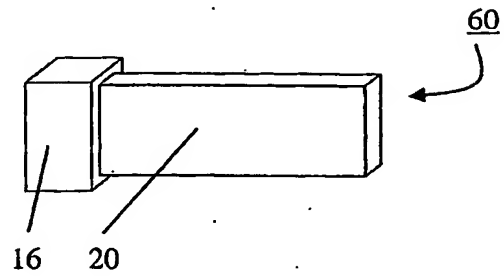
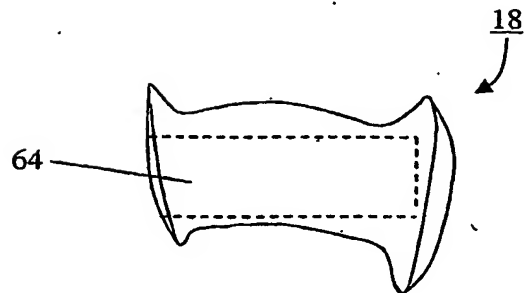


FIG. 7B:



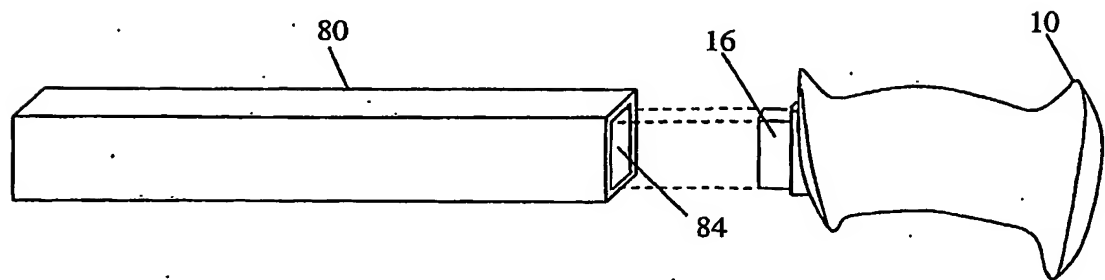


FIG. 8A

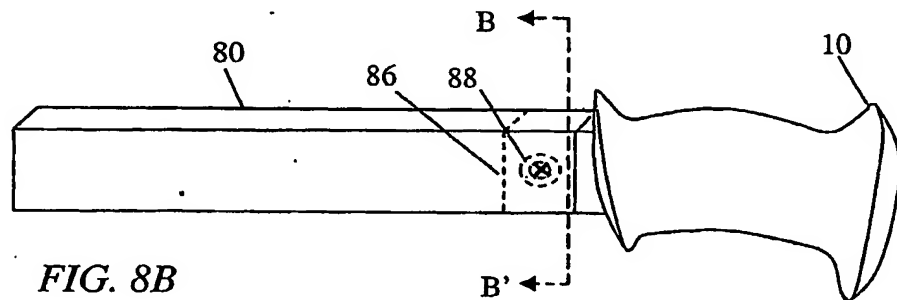


FIG. 8B

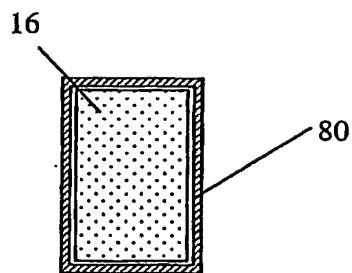


FIG. 8C

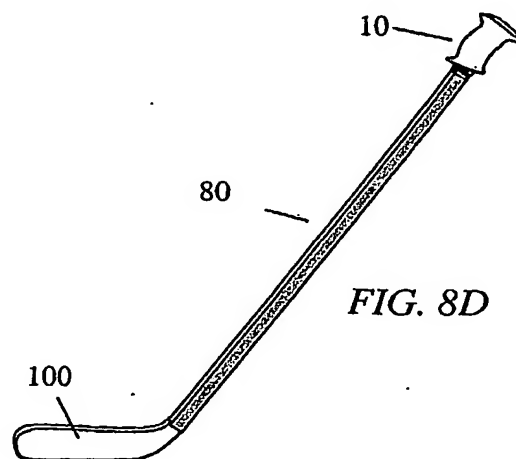


FIG. 8D

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